**SOUTHEAST COMMUNITY COLLEGE**
**DIVISION OF ARTS AND SCIENCES**
**Mathematics**
**Revision Date: 07-01-20**
Syllabus Statements

## I. CATALOG DESCRIPTION

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|---|---|
| Course Number: | MATH1103 |
| Course Title: | Intermediate Algebra Module III |
| Prerequisite(s): | A grade of "B" or higher in MATH1102 OR co-enrollment in MATH1102. The prerequisite must be completed before the current course is completed. |
| Catalog Description: | Study of complex numbers, solving quadratic equations, graphing quadratic functions, dividing radical expressions, and solving radical equations. The prerequisite must be completed before the current course is completed. |
| Credit Hours: | 1.0 |
| Class Hours: | 15 |
| Lab Hours: | 0 |
| Total Contact Hours: | 15 |

## II. COURSE OBJECTIVES: *Course will:*

**A.** Develop a familiarity with complex numbers and their properties.
**B.** Develop techniques for solving radical and quadratic equations and applications.
**C.** Develop techniques for graphing quadratic functions.

## III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

**A.** Student learning outcomes: *Student will be able to:*
- **1.** Simplify expressions involving operations with complex numbers.
- **2.** Simplify expressions involving division with radicals.
- **3.** Use a variety of techniques to solve radical and quadratic equations.
- **4.** Graph quadratic functions and interpret the graph of a function as related to applications.
- **5.** Use problem solving skills to solve applications.

**B.** General education learning outcomes
- **1.** GELO #5: Analytical, Quantitative, and Scientific Reasoning

  Outcome: Apply mathematical and scientific methods to solve problems from an array of contexts and everyday situations.
  Outcome: Effectively develop strategies, algorithms, or experiments (or performing experiments) to better describe the systems or to solve the problems.
  Outcome: Manipulate formulas, data sets, graphs, tables, etc. in a way to produce a meaningful outcome.

## IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

**A.** Dividing Radical Expressions and Solving Radical Equations.
**B**. Solving Quadratic Equations using Factoring, Completing the Square, and the Quadratic Formula.
**C**. Complex Numbers and Solving Quadratic Equations and Equations Quadratic in Form.
**D**. Graphing Quadratic Functions.

## V. INSTRUCTIONAL MATERIALS

**A.** Required Text(s):
- **1**. Direct Digital Access to MyLab Math (through Canvas) will be billed to your student account. ISBN: 9780136825456.

**B.** Other Resources:

**1**. Paper and writing instrument

**2**. Scientific calculator (recommended)

## VI. METHODS OF PRESENTATION/INSTRUCTION

**A** Methods of presentation typically include a combination of following:

**1**. Assigned reading and homework assignments for the student to do in class or outside of class on MyMathLab.

**2**. Individual tutorial with the student on any subject matter which the student is having difficulty comprehending.

**3**. Additional tutorial through the Multi Academic Center.

**4**. Mini-lectures.

## VII. METHODS OF EVALUATION

**A.** Methods of evaluation typically include a combination of the following:

**1**. MyMathLab HW

**2.** Module exam

**C.** GRADING SCALE

| | |
|---|---|
| A+ | 95-100 |
| A | 90-94 |
| B+ | 85-89 |
| B | 80-84 |
| F | 79 or less |

## VIII. SPECIFIC COURSE REQUIREMENTS

**A**. To successfully complete this course, the student must complete all assigned work and score 80% or better on the module exam. All work must be completed by the end of the quarter the student is registered.